

REMARKS

A new dependent claim 30 has been added. No new matter was added. Accordingly, claims 1 and 11-30 are pending. Applicants submit arguments for overcoming the rejections based on the prior art of record. Applicants respectfully submit that the present application is in condition for allowance.

I. Priority Under 35 USC § 119

On the Office Action Summary page, boxes are checked indicating that the certified copy of the priority document has not been received.

A copy of a "Notification Concerning Submission or Transmittal of Priority Document" (Form PCT/IB/304) was filed with the present application and is of record in the present application. This Form indicates that the International Bureau received the certified copy of the priority document on February 21, 2003. Accordingly, Applicants submit that they have complied with all requirements with respect to the claim of priority, and respectfully request that receipt of the certified copy be properly acknowledged in this national phase application.

II. Claim Rejections - 35 USC §102(b)

In the Office Action, claims 1, 17, 28 and 29 are rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,638,979 issued to Shea.

A claim of a patent application is anticipated under 35 USC §102 only if each and every element is found described in a single prior art reference. The identical invention must be shown in as complete detail as contained in the claim. The elements identified by the reference must be arranged as required by the claim. If a prior art reference relied on in a rejection made under 35

USC §102 does not contain every element recited in the claim in as complete detail as is contained in the claim and arranged as recited in the claim, the rejection is improper.

Applicants respectfully submit that Shea fails to anticipate independent claim 1 of the present application. Shea discloses five separate and stand-alone embodiments of a thermally-insulated container used to transport perishables such as fruits and other edible products. Each of the embodiments disclosed in Shea fails to contain every element recited in claim 1 of the present application in as complete detail as is contained in claim 1 and arranged as recited in claim 1. For this reason, Applicants respectfully request that the anticipation rejection be withdrawn.

FIRST EMBODIMENT OF SHEA

The First Embodiment of Shea is illustrated in FIGs. 1, 2, and 2a. (See column 2, lines 62-67, for a brief description of FIGs. 1, 2 and 2a and their depiction of a “first embodiment”.) This embodiment is discussed in detail on column 3, lines 14-63.

Claim 1 of the present application has been amended to require an “inner sputtering target retention frame defining a void the size of a sputtering target”. No new matter was added. For example, see page 4, lines 11-12, of the present application with respect to “retention frame 10 comprising a void the size of the target” and page 6, line 12, with respect to “a target is inserted into the void of the retention frame 10”.

It is clear from FIGs. 1, 2 and 2a of Shea and the description of Shea on column 3, lines 14-63, that the first embodiment of Shea fails to disclose this claim limitation recited in claim 1 of the present application in as complete detail as is contained in claim 1 and arranged as recited in claim 1. Shea simply fails to disclose an “inner sputtering target retention frame defining a

void the size of a sputtering target". For at least this reason, the rejection of claim 1 as being anticipated by Shea should be withdrawn.

Further, claim 1 of the present application requires "supports" extending from a bottom plate of the transport box and "wheels" adjacent an edge portion of the bottom plate. See supports (reference numeral 25) and wheels (reference numeral 24) in FIGs. 1 and 2 of the present application, as filed. In addition, claim 1 requires that "the height of the supports is greater than the height that each of the wheels extends from the bottom plate of the outer box". Accordingly, as best illustrated in FIG. 2 of the present application, the transport box is supported in a stable position on the supports (25) when the transport box is rested in a normal position on an underlying surface. However, if the transport box is tilted at an incline, the transport box is supported on an underlying surface via wheels (24) which enable ready manual transport of the transport box.

The first embodiment of Shea merely provides a flat bottom plate. This is best illustrated in cross-section in FIG. 2 of Shea. The first embodiment fails to disclose "supports" extending from the bottom plate and fails to disclose wheels. For this same reason, the first embodiment of Shea clearly also fails to disclose the limitation that "the height of the supports is greater than the height that each of the wheels extends from the bottom plate of the outer box".

For these reasons, Applicants respectfully submit that the first embodiment of Shea clearly fails to anticipate claim 1 of the present application.

SECOND EMBODIMENT OF SHEA

The Second Embodiment of Shea is illustrated in FIGs. 3 and 3a. (See column 3, lines 1-4, for a brief description of FIGs. 3 and 3a and their depiction of a "second embodiment".) This

embodiment is separate and different from the first embodiment and is discussed in detail on column 3, line 64, to column 4, line 31.

The second embodiment is directed to a flexible, insulating, open-bottom cover (31) that can be placed over a standard catering cart (33) having wheels. The cover (31) includes a series of separate flexible panels that interconnect via strips (37) of hook-and-loop type fasteners.

As stated above, claim 1 of the present application requires an “inner sputtering target retention frame defining a void the size of a sputtering target”. Claim 1 also requires a plastic inner box and an outer box. In addition, claim 1 requires “supports” extending from a bottom plate of the transport box and “wheels” adjacent an edge portion of the bottom plate. Further, claim 1 requires that “the height of the supports is greater than the height that each of the wheels extends from the bottom plate of the outer box”. This arrangement of supports and wheels permits the transport box of the present invention to be supported in a stable position on the supports (25) when the transport box is rested in a normal position on an underlying surface. However, if the transport box is tilted at an incline, the transport box is supported on an underlying surface via wheels (24) which enable ready manual transport of the transport box.

It is clear from FIGs. 3 and 3a of Shea and the description of Shea on column 3, line 64, to column 4, line 31, that the second embodiment of Shea fails to disclose these claim limitations recited in claim 1 of the present application in as complete detail as is contained in claim 1 and arranged as recited in claim 1. The wheeled catering cart (33) of Shea fails to disclose an “inner sputtering target retention frame defining a void the size of a sputtering target”. The conventional catering cart (33) of the second embodiment of Shea also fails to disclose a plastic inner box and an outer box and fails to disclose supports that extend to a greater height than that

of the height at which the wheels extend from the bottom of the transport container. When the catering cart (33) is rested on an underlying surface, the cart is always supported on the wheels.

For the above stated reasons, Applicants respectfully submit that the second embodiment of Shea fails to anticipate claim 1 of the present application.

THIRD EMBODIMENT OF SHEA

The Third Embodiment of Shea is illustrated in FIG. 4. (See column 3, lines 5-6, for a brief description of FIG. 4 and its depiction of a “third embodiment”.) This embodiment is discussed in detail on column 4, lines 32-44.

Applicants submit that the third embodiment of Shea fails to anticipate independent claim 1 of the present application for the same reasons discussed above in detail with respect to the first embodiment of Shea. For example, the third embodiment of Shea fails to disclose an inner sputtering target retention frame having a void the size of a sputtering target and fails to disclose the required arrangement of supports and wheels on the bottom plate of the transport box. See details of these arguments provided above.

FOURTH EMBODIMENT OF SHEA

The Fourth Embodiment of Shea is illustrated in FIG. 5. (See column 3, lines 7-8, for a brief description of FIG. 5 and its depiction of a “fourth embodiment”.) This embodiment is discussed in detail on column 4, line 45, to column 5, line 25. It discloses a soft-sided thermal resistant tote bag.

Applicants submit that the fourth embodiment of Shea fails to anticipate independent claim 1 of the present application for the same reasons discussed above in detail with respect to

the first embodiment of Shea. For example, the fourth embodiment of Shea fails to disclose an inner sputtering target retention frame having a void the size of a sputtering target and fails to disclose the required arrangement of supports and wheels on the bottom plate of the transport box. See details of these arguments provided above.

FIFTH EMBODIMENT OF SHEA

The Fifth Embodiment of Shea is illustrated in FIG. 6. (See column 3, lines 9-10, for a brief description of FIG. 6 and its depiction of a “fifth embodiment”.) This embodiment is discussed in detail on column 5, lines 26-38. It discloses a soft-sided, open-top, thermal resistant bulk bag.

Applicants submit that the fifth embodiment of Shea fails to anticipate independent claim 1 of the present application for the same reasons discussed above in detail with respect to the first embodiment of Shea. For example, the fifth embodiment of Shea fails to disclose an inner sputtering target retention frame having a void the size of a sputtering target and fails to disclose the required arrangement of supports and wheels on the bottom plate of the transport box. See details of these arguments provided above.

For all of the above referenced reasons, Applicants respectfully submit that independent claim 1 and dependent claims 17, 28 and 29 are not anticipated by any of the five Embodiments disclosed by Shea. None of the Shea Embodiments contain every element recited in claim 1 of the present application in as complete detail as is contained in claim 1 and arranged as recited in claim 1.

Accordingly, Applicants respectfully request reconsideration and removal of the §102(b) rejection of claims 1, 17, 28 and 29.

III. Claim Rejections – 35 USC §103(a)

A. *In the Office Action, claims 11-13, 18 and 22 are rejected under 35 USC §103(a) as being obvious over U.S. Patent No. 5,638,979 issued to Shea.*

Applicants respectfully submit that independent claim 1 and the dependent claims listed above are patentable and non-obvious in view of Shea.

As discussed above, Shea discloses a box, a cart, a flexible tote bag, and a flexible bulk bag for loosely holding perishable food items. The box embodiment of Shea includes a flexible thermal-insulating inner liner including bubble wraps and air spaces. The cart embodiment of Shea includes flexible outer thermal-insulating panels that can be connected together to form an open-bottomed cover that loosely fits over a conventional wheeled catering cart. The tote and bulk bags are flexible thermal-insulating bags.

In contrast, the present invention is directed to a transport box for a sputtering target used in the manufacture of semiconductors. As disclosed on page 1 of the present application, as filed, sputtering targets can be made of “brittle materials” that can readily be damaged or broken during shipment to a semiconductor manufacturing plant or during handling within the plant. The cost of these fragile sputtering targets is high, thus great financial losses are incurred due to such damage and breakage. The present invention is directed to a transport box that overcomes problems with the transportation and handling of such fragile, expensive sputtering targets.

Claim 1 of the present application requires an “inner sputtering target retention frame defining a void the size of a sputtering target”. This provides a structural claim limitation that

should not simply be overlooked. The "frame" is rigid and its void matches the target's shape so that it can maintain the target shape and prevent the target from movement within the transport box during rough handling of the transport box.

Shea clearly fails to disclose, teach, or suggest a rigid sputtering target retention frame defining a void the size of a sputtering target. Shea's thermal insulating liners provide a volume into which perishables are loosely placed. This space is not shaped to the specific size of the perishable items; rather, Shea simply defines a bulk space. If a brittle article is transported in the thermal insulating containers of Shea, the brittle article is not prevented from shifting within the container and would clearly become damaged due to harsh handling of the container during transportation and/or handling of the container within a plant. Thus, one of ordinary skill in the art is not fairly taught by Shea how to safely and easily transport and handle fragile, expensive sputtering targets within a semiconductor manufacturing plant in a manner that prevents damage and breakage of the sputtering targets.

Further, claim 1 of the present invention requires the transport box to have a bottom plate from which supports and wheels extend. The supports are a separate claim element from the bottom plate of the transport box. Claim 1 requires the height of the supports to be greater than that of the wheels. Thus, when supported in a normal upright position on an underlying surface, the supports engage the underlying surface, and the transport box is supported on the underlying surface via the supports. Thus, the transport box is positioned in a stable and slip-resistant manner due to the friction between the underlying surface and the supports. The supports also provide areas into which forks of a forklift can be inserted to engage and lift the transport box. However, the transport box can also be tilted to an inclined position such that the transport box is

supported on an underlying surface on the wheels. In this position, the transport box can be readily wheeled manually about a semiconductor manufacturing plant.

In four of the five embodiments disclosed by Shea, the disclosed transport container neither has supports nor wheels. The embodiment of Shea including wheels merely discloses a conventional catering cart. In a proper upright condition, the cart is always supported on an underlying surface via the wheels of the cart. Accordingly, this embodiment clearly fails to disclose the claim limitation of the present application requiring the height of supports to be greater than that of the wheels.

Thus, one of ordinary skill in the art is not fairly taught by Shea how to safely and easily transport and handle fragile, expensive sputtering targets within a semiconductor manufacturing plant in a manner that prevents damage and breakage of the sputtering targets. Shea discloses the use of wheels or no wheels, but fails to disclose the combination of supports and wheels and their arrangement as required by claim 1 of the present application. Accordingly, for at least these reasons, Applicants respectfully submit that claim 1 is patentable and non-obvious relative to the five embodiments disclosed by Shea.

Accordingly, Applicants respectfully request that this rejection be withdrawn from claims 11-13, 18 and 22.

B. *In the Office Action, claims 14-16, 19-21 and 23-27 are rejected under 35 USC §103(a) as being obvious over U.S. Patent No. 5,638,979 issued to Shea in view of JP 11-011478.*

JP '478 is cited by the Examiner solely for a disclosure of a through-type hold. Shea is relied upon for all other claim limitations.

Applicants respectfully submit that independent claim 1 of the present application is patentable and non-obvious over the combination Shea in view of JP '478 for the same reasons that claim 1 is patentable and non-obvious over Shea. For example, the combination of Shea in view of JP '478 fails to fairly disclose, suggest or teach the claim limitation requiring an "inner sputtering target retention frame defining a void the size of a sputtering target". Further, the combination of Shea in view of JP '478 fails to disclose, suggest or teach a transport box having a bottom plate with both supports and wheels extending therefrom and fails to disclose, suggest or teach that the supports extend a greater height than the wheels. Accordingly, one of ordinary skill in the art cannot arrive at the present invention based on the teachings of Shea in view of JP '478.

Therefore, Applicants respectfully submit that claims 14-16, 19-21 and 23-27 are patentable and not obviated by Shea in view of JP '478. Applicants respectfully request that this rejection be withdrawn.

IV. New Dependent Claim 30

New claim 30 is added and requires the presence of a sputtering target retained within the void of the inner sputtering target retention frame. No new matter was added; for example, see page 6, lines 11-14, and page 7, lines 12-16, of the present application, as filed. It is clear that neither Shea nor JP '478 discloses such a combination.

V. Conclusion

In view of the above amendments and remarks, Applicants respectfully submit that the claim rejections have been overcome and that the present application is in condition for allowance. Thus, a favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Amendment to our deposit account no. 08-3040.

Respectfully submitted,
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